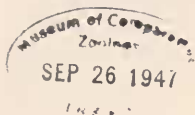


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ON VENEZUELAN REPTILES AND AMPHIBIANS  
COLLECTED BY DR. H. G. KUGLER

BY BENJAMIN SHREVE

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No. 5 — *On Venezuelan Reptiles and Amphibians*  
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BY BENJAMIN SHREVE

In the course of his geological work Dr. H. G. Kugler has done considerable zoological collecting in Venezuela and adjacent countries. His earlier collections went to the Museum of Natural History in Basel, Switzerland, where they were reported on, at least in part, by the late Dr. Jean Roux. However, as war conditions prevented Dr. Kugler from sending his 1939-1945 collections to Europe, he generously donated them to the Museum of Comparative Zoölogy with the request that a proportion of the duplicates be sent to Basel. An indication of those sent is given in this report.

Unless otherwise stated, all Kugler localities mentioned are in the Acosta District, Falcón State, Venezuela. Material from Riecito was taken by H. P. Haller who, together with Dr. R. Muhlemann, contributed to the collection. Collecting dates, except for the new forms, are not included, as in general they are too indefinite. The only localities in the first shipment, collected in 1944, were Pauji and Guacharaca, each of which is sometimes followed by the word "area." As the two places are very close together (about 6 miles apart), all this material was catalogued under Pauji. If necessary the Guacharaca specimens can be separated by reference to the field numbers and Dr. Kugler's notes.

Dr. Kugler's notes contain many descriptions of the appearance of the creatures in life. Some of these observations are published below. Included in the collection are a few animals from British Guiana and Trinidad which I have not listed though they are greatly appreciated. In conclusion I should like to say that the Museum of Comparative Zoölogy is extremely grateful to Dr. Kugler and his colleagues for presenting this interesting and valuable collection, mostly from a region in which little collecting has been done.

The following forms are described as new, all type localities being in Falcón State, Venezuela.

- Gonatodes caudiscutatus falconensis* from Pauji, Acosta District
- Tretioscincus bifasciatus kugleri* from Pauji, Acosta District
- Leptodeira rhombifera kugleri* from Riecito, Acosta District
- Oxyrhopus venezuelanus* from Pauji, Acosta District

## TESTUDINATA

## PSEUDEMYS ?SCRIPTA subspecies

- 1 (M. C. Z. 49055) La Penita & Moravita Springs, Cerro Chichiriviche, Silva District.

Possibly this juvenile specimen should be referred to *dorbignyi*, which seems to be a subspecies of *scripta*. Yet it appears unlikely that a Venezuelan turtle is referable to an Argentina form, a point that cannot be decided until a series of Venezuelan adults are available.

## SAURIA

## GONATODES CAUDISCUTATUS FALCONENSIS subsp. nov.

*Type.* M. C. Z. 48878, a gravid female, from Pauji, Acosta District, Falcón State, Venezuela, collected by H. G. Kugler, June 11 to August 30, 1945.

*Paratypes.* M. C. Z. 48718, 48879-85 and six Basel Mus. (uncatalogued) specimens. Except that 48718 was collected in 1944, and M. C. Z. 49054 from Ojo de Agua in July, 1945, the rest of the series have the same data as the type.

*Diagnosis.* Apparently differs from typical *caudiscutatus* only in coloration and possibly larger size. Both sexes of this new form exhibit supraocular spine-like scales, as seems to be the case with *caudiscutatus*.

*Coloration in alcohol.* Above, brown, sides darker; head indistinctly marked and mottled with grayish and blackish; back with two rows of rather narrow, grayish, transverse bars, each alternating with, or almost meeting its fellow of the opposite series on the vertebral line; tail similarly marked, but the opposing bars usually uniting to form a single, rather irregular series; just preceding each caudal bar, or pair of bars, are two series of blackish spots that meet, or fail to meet, on the mid line, sides and limbs barred or spotted with grayish. Below, gray or grayish brown, throat dotted and marked with light grayish; tail blackish or grayish spotted with white.

Those paratypes, including juveniles, that exhibit the female coloration agree essentially with the type. The backs of some show the kind of black spots described for the tail of the type; darkening of the sides is sometimes scarcely noticeable; ground color of one paratype light grayish brown. Below, similar to type except two which

are very light gray; basal portion of tail often mostly white breaking up into white spots distally, black between the spots.

The six examples showing male coloration differ from the females in the reduction in number, intensity, and often size of the markings which may be more or less obsolete, less reduced on tail; in front of and slightly above the insertion of forelimb is a rather small black-edged ocellus whose white center is often elongate, or ocellus sometimes very indistinct. Below, similar to female, or thighs and hind part of belly lighter. Regenerated tails in both sexes are brown above with obscure, longitudinal, grayish streaks. Below, lighter.

#### *Measurements*

	Total length	Head & Body	Tail	Hind limb	Hind foot
Type	90 mm.	45 mm.	45 mm.	19 mm.	8 mm.
Paratypes	49-91 mm.	26-46 mm.	23-48 mm.	11-22 mm.	4-9 mm.

The tip of the tail is regenerated in the type while in many of the paratypes the tail is either regenerated, incomplete, or missing. Extremes of tail measurements are of complete tails.

According to Kugler the coloration of the type in life was: Above, brown-black with a mosaic of dirty olive-green spots; tail with faint pattern of light mauve. Below, throat gray-mauve with dirty yellow spots; belly yellowish gray and olive. He describes a male paratype (Basel Mus.) as having the head and neck olive-green and light brown speckled with yellow; jaws light brown barred with yellow and gray; a white spot rimmed with black on neck; back and flanks dirty olive-brown with seven pairs of dark, angular-shaped spots; tail similarly spotted. An unsexed example is described as having a light brown throat dotted with gray, while that of another unsexed specimen is said to be "light orange."

#### GONATODES VITTATUS (Lichtenstein)

*Gymnodactylus vittatus* Lichtenstein, 1856, Nomencl. Mus. Zool. Berol., p. 6:

La Guaira, Puerto Cabello and Caracas, Venezuela.

1 (M. C. Z. 48719) Pauji

7 (M. C. Z. 48886-90, 48930) El Mene

8 (Basel Mus.) Pauji and El Mene

1 (M. C. Z. 49018) Cerro Cosme

12 (M. C. Z. 49056-60) Rio Ricoa near Cumarebo, Zamora District

M. C. Z. 48930 appears to be in the process of changing from a female type of coloration into that of the adult male. The dorsum is

brownish gray with blackish spots; the vertebral stripe, edged with black on the head, is most sharply defined anteriorly, rather indistinctly so posteriorly. The gular region is strongly marked with black, the belly is white, its sides showing traces of the dark ventral coloring usual in males.

#### PSEUDOGONATODES LUNULATUS (Roux)

*Lepidoblepharis lunulatus* Roux, 1927, Verh. Nat. Ges. Basel, **38**, p. 252: El Mene, Acosta District, Falcon State, Venezuela.

4 (M. C. Z. 48891-4) Pauji

1 (Basel Mus.) Ojo de Agua

Total length of largest individual 50 (26 + 24) mm.

According to the plate and diagnosis in Parker (1926, Ann. Mag. Nat. Hist. (9), **11**, pp. 293, 297) this gecko is really referable to *Pseudogonatodes*, although left in *Lepidoblepharis* by Burt and Burt (1933, Trans. Acad. Sci. St. Louis, **28**, p. 6).

The head differences cited by Roux (*loc. cit.* p. 254) as a means of separating this form from *P. furvus* Ruthven do not appear to be very constant. More reliable is the fact that in *lunulatus* the scales on the snout are larger and transversely enlarged, especially anteriorly. Apparently *lunulatus* does not grow as large as *furvus*. As stated by Roux the two species differ in coloration. Kugler describes the head and jaws of one as having a "light brown pattern" with a red concavity below the eye.

#### THECADACTYLUS RAPICAUDA (Houttuyn)

*Gekko rapicauda* Houttuyn, 1782, Verhandel. Zeeuwsch. Genoot. Wet. Vlis-singen, **9**, p. 323: American Islands.

4 (M. C. Z. 48722, 48900, 49034 & Basel Mus.) Pauji

2 (Basel Mus.) Riecito

#### SPHAERODACTYLUS MOLEI Boettger

*Sphaerodactylus molei* Boettger, 1894, Journ. Trinidad Field Nat. Club, **2**, p. 80: Caparo, Trinidad.

? *Sphaerodactylus venezuelanus* Roux, 1927, Verh. Nat. Ges. Basel, **38**, p. 254: El Mene, Acosta District, Falcón State, Venezuela.

10 (M. C. Z. 48720-1, 48895-9, Basel Mus.) Pauji

All ten specimens show much variation in coloration, ranging from a very decorative black and white pattern of longitudinal streaks to

one almost devoid of markings. Some of the latter display a grayish dorsolateral streak. These examples appear to represent *venezuelanus* Roux, but on comparing them with the description and Trinidad specimens of *molei*, no difference in scalation, and no consistent differences in coloration, were found.

The description of *venezuelanus* states that the species has smooth dorsal scales. Under low magnification this appears to be the case, but with high power keels are to be seen.

Possibly this variability is explainable on the grounds that these geckos come from an area of intergradation or hybridization of two different forms. If so, one would appear to be *molei*, while the striped form, of which no pure population appears to be known at present, would be referable to *venezuelanus*. If such a pure population is discovered, it might be predicted that it will be found in the Santa Marta region of Colombia. Assuming all this to be true, *venezuelanus* should then become a race of *molei*, or both races of some other form, possibly of *lineolatus*.

In life the tail of one gecko was "yellow brownish," of another "gray orange and yellow with 6 bars." The throat of the latter was "gray with small dark spots," while two others are described as having "light yellow throats."

#### ANOLIS FUSCOAURATUS KUGLERI Roux

*Anolis kugleri* Roux, 1929, Verh. Nat. Ges. Basel, **40**, p. 29: El Mene, Acosta District, Falcon State, Venezuela.

3 (M. C. Z. 48727-8, Basel Mus.) Pauji

Total length of largest ♂, 119 (40 + 79) mm., head and body length of gravid ♀, 38 mm., tail incomplete.

In this series the supraorbital semicircles are separated by a single row of scales, while in six specimens of *fuscoauratus* in the Museum collection separation is by two rows; in a seventh anole the number is uncertain. The original description of the type of *kugleri*, however, calls for two to three rows so that more material may show *kugleri* is not a recognizable race, though apparently it does not grow as large as *fuscoauratus*.

The type locality of *fuscoauratus* Duméril & Bibron (1837, Erp. Gén. **4**, p. 110) was said to be Chile, but this is very doubtful for D'Orbigny and Bibron (1847, Voy. Amer. Merid. Rept., **5**, p. 7) give it as Rio Mamoré, between Loreto and the confluence of Rio Sara, Moxos Province, Bolivia. As D'Orbigny was the collector the last

locality is probably correct, and there is apparently no doubt that the two sets of authors were using the same material. This reference has been consistently overlooked in the past, though the accompanying plate (loc. cit., 9, pl. iii, figs. 1-4), together with the name attributed to D'Orbigny, was cited in Duméril & Bibron's synonymy of *fuscoauratus*, despite the fact that the report on D'Orbigny's reptiles was not published until ten years after the appearance of the *Erpétologie Générale*, assuming the title pages are reliable. Probably the reference was to a manuscript.

#### ANOLIS NITENS (Wagler)

*Draconura nitens* Wagler, 1830, Nat. Syst. Amphib., p. 149: America.

*Anolis chrysolepis* Duméril & Bibron, 1837, *Erp. Gén.*, 4, p. 94: ". . . se trouve à la Guyane et à Surinam" i.e. Guianas.

7 (M. C. Z. 48723-6, 49035-7) Pauji

1 (M. C. Z. 49050) Riccito

What has been regarded as *chrysolepis* appears to differ from *nitens* only in coloration. Judging by Beebe's (1944, *Zoologica (N.Y.)*, 29, pp. 197, 200) account, the two apparently occur together in the same sort of habitat, so seem to represent two color phases of the same species. On the basis of the material listed above, together with another Venezuela series in the Museum of Comparative Zoölogy, it appears that those with the *chrysolepis* type of coloration (one example in each series) attain to slightly larger dimensions than the *nitens*, but Beebe's (loc. cit. pp. 197-8, 200) measurements of the total length of adults show complete inclusion of *nitens* in *chrysolepis* (165-209 mm., and 136-210 mm. respectively), though his lower figure for *chrysolepis* appears abnormally small.

Dr. Kugler's notes reveal that M. C. Z. 49035-6 were taken in copulation, the female having the light vertebral streak of *chrysolepis*, the male presenting the *nitens* pattern of chevrons, their apices directed posteriorly. This confirms the conspecificity of the two forms. The female held a pair of developing eggs. As the original description of *nitens* is not very diagnostic, there appears to be some doubt about the applicability of the name. If it cannot be used, then *chrysolepis*, which was much better diagnosed, can be employed.

#### NOROPS AURATA (Daudin)

*Anolis auratus* Daudin, 1802, *Hist. Nat. Rept.*, 4, p. 89: Type locality unknown.

1 (M. C. Z. 49052) El Mene



## POLYCHRUS MARMORATUS (Linné)

*Lacerta marmorata* Linné, 1758, Syst. Nat., ed. 10, p. 208: America.

2 (M. C. Z. 48729-30) Pauji

1 (M. C. Z. 49053) Ojo de Agua

I follow Parker (1935, Proc. Zool. Soc. London, p. 515) in regarding *marmoratus* as a full species, although he admits that the relationship with *liogaster* may be subspecific. Burt and Burt (1933, Trans. Acad. Sci. St. Louis, 28, p. 40) hold different views.

Of one example Kugler writes: "called Cameleon by local people; changes color according to its surroundings," of another, "beautiful emerald green with brown markings." This specimen shows little trace of green now, being essentially brown with darker markings.

## TUPINAMBIS NIGROPUNCTATUS Spix

*Tupinambis nigropunctatus* Spix, 1825, Spec. Nov. Lacert. Brasil., p. 18: Brazil.

1 (M. C. Z. 48747) Pauji

## AMEIVA AMEIVA AMEIVA &gt; &lt; PRAESIGNIS

*Lacerta ameiva* Linné, 1758, Syst. Nat., ed. 10, p. 202: America.

*Cnemidophorus praesignis* Baird & Girard, 1852, Proc. Acad. Nat. Sci. Philadelphia, p. 129: Panama.

5 (M. C. Z. 48731-5) Pauji

Two of the three larger ones approach *praesignis*, while the third seems nearer *ameiva*. The two juveniles, though closer to *ameiva*, may be too young to exhibit subspecific characteristics.

## CNEMIDOPHORUS LEMNISCATUS LEMNISCATUS (Linné)

*Lacerta lemniscata* Linné, 1758, Syst. Nat., ed. 10, p. 209: Guinea, *lapsus calami* for Guiana.

2 (M. C. Z. 48737-8) Pauji

2 (M. C. Z. 49051) Riccito

Regarding one of these lizards, Kugler writes: "Blue-greenish in color; common along roads and in villages, but rarely observed in forests."

## PTYCHOGLOSSUS KUGLERI Roux

*Ptychoglossus kugleri* Roux, 1927, Verh. Nat. Ges. Basel, 38, p. 256: El Mene, Acosta District, Falcón State, Venezuela.

17 (M. C. Z. 48739-42, 48910-6, Basel Mus.) Pauji

Midbody scale rows 29-31 (one not counted); scale rows from second row behind parietals to rear of hind limb 29-30; transverse rows of ventrals from collar to preanals 16-18; supraoculars 3.

Dr. Kugler states that this species is "Never found in bright daylight — it loves dusk or hunts perhaps at night. Above, glossy dark brown; belly salmon colored." Of another he says: "*Ptychoglossus* 165 mm. long. Above, glossy dark brown; belly bright salmon-tomato color." Of a third, "belly light orange and gray." This red or orange color still persists, though considerable fading has taken place since the specimens were received.

#### ANADIA STEYERI Nieden

*Anadia steyeri* Nieden, 1914, Sitzb. Ges. Nat. Freunde Berlin, p. 365: Puerto Cabello, Venezuela.

1 (M. C. Z. 48901) Pauji

Midbody scale rows 44; scale rows from occiput to rear of hind limb 62; scale rows from chin shields to edge of collar 20; femoral pores 7; total length 118 (56 + 62) mm.

The series of femoral pores is interrupted, as mentioned by Roux (1927, Verh. Nat. Ges. Basel, 38, p. 259), two being at the beginning of the thigh near the preanal region and the remaining five near the knee. Some such arrangement may have occurred in the type in which event Nieden may have included in his pore count the scales separating the two groups of pores.

In coloration our specimen differs from both the type and the example seen by Roux (*loc. cit.*). On either side of the head are two brown, longitudinal lines, the upper extending on to the neck and breaking up into a few scattered spots on the flanks. The longitudinal series of dorsal spots mentioned by Nieden and Roux appear to have fused to form a brown vertebral band about 12 scales in width at midbody.

#### BACHIA LINEATA Boulenger

*Bachia lineata* Boulenger, 1903, Ann. Mag. Nat. Hist. (7), 12, p. 432: Duaca, Venezuela.

45 (M. C. Z. 48736, 48902-9, Basel Mus.) Pauji

Midbody scale rows 24-26; scale rows from occiput to rear of hind limb 42-45. The scale counts of M. C. Z. 48902 are not included, as it is an embryo removed from an egg, and consequently referred to *lineata* with some doubt.

The original description states that the dorsal scales of this species are quadrangular, thus putting it into the *cophias* group of the genus. This may have misled Roux into believing his specimens represented a new form which he (1929, Verh. Nat. Ges. Basel, 40, p. 31) described as *anomala*, having hexagonal imbricate dorsals as in the *dorbignyi* group. Using other characters besides the shape of the dorsals, Roux, following Ruthven, decided his *anomala* was nearer the *cophias* group.

Burt and Burt (1931, Bull. Amer. Mus. Nat. Hist., 61, pp. 315-316) in their key to the genus place *lineata* in the *cophias* group, evidently on the basis of Boulenger's statement regarding the shape of its dorsals. *B. anomala* was not included or mentioned, so apparently the Burts had no specimens of it, but the same authors (1933, Trans. Acad. Sci. St. Louis, 28, p. 57) relegate it to the synonymy of *lineata*, apparently being the first to do so.

Boulenger, when describing *lineata*, stated that it had 5, dark, longitudinal lines on the dorsum. Apparently this is a mistake for no member of the genus I have examined has more than three. Alternatively *anomala* may prove to be distinct.

#### TRETIOSCINCUS BIFASCIATUS KUGLERI subsp. nov.

*Type.* M. C. Z. 49039, an adult male, from Pauji, Acosta District, Falcón State, Venezuela, collected by H. G. Kugler between June 11 and August 30, 1945.

*Paratypes.* M. C. Z. 49038 and 48917 with the same data as the type; M. C. Z. 48743-6 with the same data but collected in 1944; Chicago Natural History Museum 17800 from Cumaná, Venezuela, collected by E. R. Blake, February 13, 1932.

*Diagnosis.* Similar to typical *bifasciatus* except that the black streak bordering the inside of the light dorsolateral line is more fully developed on each side on both head and body. On the body of *kugleri* only the inner halves of the two median scale rows remain brown, while in every Colombian specimen (presumably representing typical *bifasciatus*) seen, the *whole* of the two central rows, and in some cases all the rows between the light streaks (where the black inner streaks are obsolete) are brown. In the new form there are 16 midbody scale rows; from parietals to rear of hind limb the dorsals number 29-31 (30 in type); femoral pores 5-6 (6 in type) or absent.

*Measurements*

	Total length	Head & Body	Tail	Hind limb	Hind foot
Type	137 mm.	58 mm.	79 mm.	21 mm.	12 mm.
Paratype 48745	116 mm.	42 mm.	74 mm.	18 mm.	10 mm.
Paratype C.N.H.M. 17800	73 mm.	28 mm.	45 mm.	12 mm.	6 mm.
The remaining paratypes	—	53-58 mm.	—	23 mm.	10-12 mm.

The tail of the type is partially regenerated. That of the paratypes, where no measurement is supplied, regenerated or lost.

## AMPHISBAENA FULIGINOSA Linné

*Amphisbaena fuliginosa* Linné, 1758, Syst. Nat., ed. 10, p. 229: America.

1 (M. C. Z. 49049) Riecito

Midbody segment rows 47; body annuli 204; caudal annuli 27.

## MABUYA MABOUYA MABOUYA (Lacépède)

*Lacertus Mabouya* Lacépède, 1788, Hist. Nat. Quad. Ovip., 1, p. 378, pl. xxiv, chart (*partim*): Antilles and Sardinia (restricted by Dunn, 1936 (1935), to the Lesser Antilles).

6 (M. C. Z. 48748-51, Basel Mus.) Pauji

Native name *luzcia* (*vide* Dr. H. G. Kugler).

## SERPENTES

## TYPHLOPS LEHNERI Roux

*Typhlops lehneri* Roux, 1926, Revue Suisse Zool., 33, p. 298: Pozon, Acosta District, Falcón State, Venezuela.

19 (M. C. Z. 48919-29; Basel Mus.) Pauji

Midbody scale rows 20; dorsal scales from rostral to tail spine about 289-332 (in so small a species it is difficult to make these counts with precision); diameter included in length 31-58 times; total length of largest individual 185 mm., largest gravid ♀ 170 mm. Five of the series contain one or two eggs, a single egg removed from M. C. Z. 48922, measures 26 x 4 mm.

The specimen regarded as an adult *lehneri* by Roux (1927, Verh. Nat. Ges. Basel, 38, p. 259) appears to be a *Typhlops reticulata* despite Roux's comparison with that form.

## TYPHLOPS RETICULATA (Linné)

*Anguis reticulata* Linné, 1758, Syst. Nat. ed. 10, p. 228: America.

2 (M. C. Z. 49020-1) Pauji

Midbody scale rows 20; dorsal scales from rostral to tail spine 240-247; diameter included in length 22-24 times.

## LEPTOTYPHLOPS MACROLEPIS (Peters)

*Stenostoma macrolepis* Peters, 1857, Monatsb. Akad. Wiss. Berlin, p. 402: Caracas and Puerto Cabello, Venezuela.

3 (M. C. Z. 48752-3, 48918) Pauji

Midbody scale rows 14; dorsal scales from rostral to tail spine 229-231; subcaudals 18-19; diameter included in length 39-47 times; length of tail included in total length 14-16 times; total length of largest individual, a gravid ♀ which appears to contain 3 eggs, 315 (295 + 20) mm.

## NINIA ATRATA (Hallowell)

*Coluber atratus* Hallowell, 1845, Proc. Acad. Nat. Sci. Philadelphia, p. 245:

"... Colombia, within 200 miles of Caraccas," i.e. Caracas, Venezuela.

4 ♂♂, 3 ♀♀ (M. C. Z. 49025-8, Basel Mus.) Pauji

Midbody scale rows 19; ventrals 139-142 (♂♂), 141-142 (♀♀); subcaudals 55-58 (♂♂), 47-49 (♀♀).

## DRYADOPHIS BODDAERTI RUTHVENI (Stuart)

*Eudryas ruthveni* Stuart, 1933, Occ. Pap. Mus. Zool. Univ. Mich., No. 254, p. 4: slopes of San Lorenzo ca. 5,500 feet, Sierra Nevada de Santa Marta, Colombia.

imm. (M. C. Z. 48754) Pauji

Midbody scale rows 17; ventrals 182; subcaudals 118. Both counts are within the range of *ruthveni*, whose juvenile coloration is insufficiently known to assist in determining subspecificity.

## DRYADOPHIS BODDAERTI BODDAERTI (Sentzen)

*Coluber Boddaerti* Sentzen, 1796, in Meyer, Zool. Arch., 2, p. 59: Type locality unknown.

♂, imm. ♂ (M. C. Z. 49022-3) Pauji

Midbody scale rows 17; ventrals 188-194; subcaudals 106+-113. As apparently only 3-4 subcaudals are missing from the truncated tail, the count appears to fall within the range of this subspecies.

The coloration of the adult agrees with that of typical *boddaerti*. The smaller example retains the juvenile pattern, which is not known sufficiently to be diagnostic; its subcaudals are the maximum number for *boddaerti* and just under the minimum for *ruthveni*. Pauji is in a region where intermediates between the two forms are likely to be found.

SPILOTES PULLATUS PULLATUS (Linné)

*Coluber pullatus* Linné, 1758, Syst. Nat., ed. 10, p. 225: Asia, in error.

♀ (M. C. Z. 49042) Riecito

head (Basel Museum) Ojo de Agua

Midbody scale rows 18; ventrals 226; subcaudals 113.

CHIRONIUS CARINATUS (Linné)

*Coluber carinatus* Linné, 1758, Syst. Nat., ed. 10, p. 223: Indies.

head (Basel Museum) Pauji

Scale rows on neck 12. Both *carinatus* and *fuscus* appear to be composite species so that revisionary studies are likely to increase the number of recognizable forms. According to Dr. Kugler's field notes this specimen was jade green above with darkish spots, yellow green on the belly, and 2 meters in length.

LEPTOPHIS OCCIDENTALIS OCCIDENTALIS (Günther)

*Ahaetulla occidentalis* Günther, 1859, Proc. Zool. Soc. London, p. 412: Guayaquil and western Ecuador.

♀ (M. C. Z. 48757) Pauji

imm. (M. C. Z. 49041) Riecito

Midbody scale rows 15; ventrals 174 (♀), 168 (imm.); subcaudals 161 (♀), 162 (imm.). The identification, as well as this combination of names, is subject to revision by Dr. J. A. Oliver, to whom the specimens have been sent in connection with his forthcoming monograph of the genus.

LEIMADOPHIS MELANOTUS (Shaw)

*Coluber melanotus* Shaw, 1802, Gen. Zool., 3, p. 534: Cape of Good Hope, Africa, (after Seba) in error.

♂, ♀, imm. ♂ (M. C. Z. 48755-6, 49024) Pauji

imm. ♂ (M. C. Z. 49040) Riecito

Midbody scale rows 17; ventrals 153-154 (♂♂), 150 (♀); subcaudals 67-71 (♂♂), 68 (♀).

## DIPSAS NEBULATA (Linné)

*Coluber nebulatus* Linné, 1758, Syst. Nat., ed. 10, p. 222: America.

2 ♂♂, ♀ (M. C. Z. 48758, 49029-30) Pauji

♀ (M. C. Z. Basel Mus.) Riecito

Midbody scale rows 15; ventrals 172-181 (♂♂), 169-172 (♀♀); subcaudals 100-102 (♂♂), 85+-90 (♀♀).

## IMANTODES CENCHOA (Linné)

*Coluber cenchoa* Linné, 1758, Syst. Nat., ed. 10, p. 226: America.

♂ (M. C. Z. 49043) Riecito

Midbody scale rows 17; ventrals 254; subcaudals 159.

## LEPTODEIRA RHOMBIFERA KUGLERI subsp. nov.

*Type.* M. C. Z. 49044, a female, from Riecito, Acosta District, Falcón State, Venezuela, collected by H. P. Haller in 1939.

*Paratypes.* M. C. Z. 49045-6 with same data as the type; Basel Museum (uncatalogued) from Pauji, Acosta District, collected by H. G. Kugler, June 11 to August 30, 1945; M. C. Z. 38531 from Orinoco River below Ciudad Bolívar, Venezuela, collected by N. A. Weber, January 23, 1935; M. C. Z. 43889 from Guiria, Paria Peninsula, Venezuela, collected by H. A. Beatty, 1937; M. C. Z. 6150 from Trinidad, collected by C. S. Cazabon, no date given.

*Diagnosis.* Essentially similar to *Leptodeira larcorum* Schmidt and Walker, which I regard as a race of *rhombifera*, but differs in coloration and in often having only 19 midbody scale rows. Instead of a nuchal stripe or "butterfly-shaped marking" on the nape there is, beginning in the post-parietal region, an elongate spot which is more or less completely (in type and some paratypes), or completely divided longitudinally. Where the separation is incomplete the connection may be anteriorly (as in the type), or posteriorly. In this race the dorsal spots appear less likely to coalesce to form an undulating band than in *larcorum*.

Midbody scale rows 19-21 (21 in M. C. Z. 38531 and 43889); ventrals 178-183 (two ♂♂), 177-183 (♀♀); subcaudals 92 (♂♂), 73-87 (♀♀). On one ♀ (M. C. Z. 38531) no ventral count could be made. In the type the midbody scale rows are 19; ventrals 183; subcaudals 83.



<i>Measurements</i>			
	Total length	Head & Body	Tail
Type	728 mm.	544 mm.	184 mm.
Paratypes	466-719 mm.	350-531 mm.	116-190 mm.

The paratype with the longest (190 mm.) tail has a head and body length of 529 mm., while the one with greatest (531 mm.) head and body length has a tail length of only 142 mm.

*Remarks.* Not included as paratypes are four examples from Rio Frio in the Santa Marta region of Colombia as they are not typical, seemingly showing evidence of intergradation with some other race. A Bonda snake which appears typical is not included on account of the occurrence in the same region of the four previously mentioned specimens.

#### OXYRHOPUS VENEZUELANUS spec. nov.

*Type.* M. C. Z. 49031, a male, from Pauji, Acosta District, Falcón State, Venezuela, collected by H. G. Kugler between June 11 and August 30, 1945.

*Diagnosis.* Apparently most closely related to *Oxyrhopus doliiatus* Duméril & Bibron, from which it differs in having a lower ventral and a higher subcaudal scale count, as well as in coloration. Possibly more material may demonstrate that the differences in scutellation are only average.

*Description.* Eye rather small, its diameter about equal to half the length of the snout which is rounded and feebly projecting; rostral broader than deep, just visible from above; internasals much shorter than the prefrontals; frontal slightly broader than long, as long as its distance from the end of the snout, shorter than the parietals; loreal much longer than deep; preocular 1, reaching the upper surface of the head but separated from the frontal; postoculars 2; temporals 2 + 3; upper labials 8, fourth and fifth entering the orbit; 4 lower labials in contact with the anterior chin shields, which are as long as the posterior; midbody scale rows 19; ventrals 180; anal entire; subcaudals 75, paired.

*Coloration in alcohol.* Above, head black; a broad, whitish, occipital blotch anterior to the first of 30 black crossbands on the body, 16 on the tail, includes the last half of the parietals; anteriorly the bands extend on to the edges of the ventrals but become progressively complete posteriorly until they form annuli upon the tail; a few bands reduced to about half, developed on one side only, to form a lateral bar or short series of alternating bars; the first six crossbands wider



than the adjacent interspaces, thereafter the bands are usually uniform in width and narrower than the interspaces, which are less uniform; interspaces brownish pink (probably red in life), each scale tipped with black, though the first four or six interspaces show little or no pink (possibly yellow or white in life). Below, yellowish white, uniform except for the encroaching bands and annuli already mentioned.

#### Measurements

Type	Total length	Head & Body	Tail
	468 mm.	365 mm.	103 mm.

*Remarks.* The type has been examined by Dr. J. R. Bailey, who is revising the group, and he concurs in considering that it represents an undescribed form.

The La Guaira, Venezuela, snake in the United States National Museum referred to *Clelia doliata* by Stejneger (1901, Proc. U. S. Nat. Mus., 14, p. 187), as well as two unlocalized specimens assigned to *Oxyrhopus doliatus* var. B. by Boulenger (1896, Cat. Snakes Brit. Mus., 3, p. 106), also undoubtedly belong to *venezuelanus*.

#### PSEUDOBOA NEUWIEDII NEUWIEDII (Duméril & Bibron)

*Scytale newwiedii* Duméril & Bibron, 1854, Erp. Gén., 7, p. 1001: Brazil.

♂ (M. C. Z. 49047) Riccito

Midbody scale rows 19; ventrals 191; subcaudals 91; upper labials 8 on right, third, fourth, and fifth entering the orbit, 7 on left, third and fourth entering the orbit; loreal absent, a condition that seems quite unusual.

#### TANTILLA MELANOCEPHALUS (Linné)

*Coluber melanocephalus* Linné, 1758, Syst. Nat., ed. 10, p. 218: America.

2 ♂♂, 4 ♀♀ (M. C. Z. 48762-5, 49033, Basel Mus.) Pauji

♂ (M. C. Z. Basel Mus.) Riccito

Midbody scale rows 15; ventrals 152-162 (♂♂), 158-164 (♀♀); subcaudals 61-68 (♂♂), 53-57 (♀♀), subcaudal counts of two (♂♀) snakes with truncated tails, not included.

In all these snakes the prefrontal is in contact with the second upper labial, the character used by Schmidt and Walker (1943, Zool. Ser. Field Mus. Nat. Hist., 24, p. 319) to separate *T. m. capistrata* Cope of arid regions of southern Ecuador and northern Peru from the Amazon race or races. However, they do not state how the race may be separated from other populations of the species. The single specimen

labeled *capistrata* in the Museum of Comparative Zoölogy is from Perico, Peru, and appears to have a much better developed light area in front of the dark nuchal band than is usual. As it is not known to what race these Venezuelan examples belong, I use a binomial.

#### STENORHINA DEGENHARDTII (Berthold)

*Calamaria degenhardtii* Berthold, 1846, Abh. Ges. Wiss. Göttingen, 3, p. 8, pl. i, figs. 3-4: Colombia.

2 ♂♂, 2 ♀♀, 3 imm. (M. C. Z. 48759-61, 49032, Basel Mus.) Pauji  
imm. (M. C. Z. 49019) Cerro Cosme

Midbody scale rows 17; ventrals 140-153 (♂♂), 149-150 (♀♀), 146-149 (imm.); subcaudals 32-41 (♂♂), 29-30 (♀♀), 29-35 (imm.).

Despite recent recognition of a race from Mexico, only a binomial is used owing to the uncertainty of the subspecific status of Venezuelan examples. Smith and Taylor (1945, U. S. Nat. Mus. Bull. 187, p. 132) revert to the original spelling of *Stenorhina*. As that spelling appears to be only a *lapsus calami* (c.f. Rules of Zoological Nomenclature, Article 19), the change seems unnecessary.

#### TRIMERESURUS ?ATROX (Linné)

*Coluber atrox* Linné, 1758, Syst. Nat., ed. 10, p. 22: Asia, in error, restricted to Surinam by Schmidt & Walker (1943).

imm., 2 heads (M. C. Z. 48766, Basel Mus.) Pauji

Midbody scale rows 25; ventrals 213; subcaudals 72. This immature example is referred to *atrox* with considerable misgiving, as its second upper labial is separated from the pit, in addition to other minor differences.

Regarding the larger fer-de-lance represented only by a head, Dr. Kugler writes: "5 feet, 11 inches, very dark species."

#### CROTALUS DURISSUS TERRIFICUS (Laurenti)

*Caudisona terrifica* Laurenti, 1768, Spec. Synops. Rept., p. 93: America.

head & rattle (M. C. Z. 48767) Pauji

♂ (M. C. Z. 49048) Riccito

Midbody scale rows 31; ventrals 167; subcaudals 31. The scale row formula (27-31-23) is higher, except perhaps anteriorly (where the skin of the neck is so distorted that the count cannot be made with certainty), than that of any of the 76 specimens seen by Gloyd (1940, Chicago Acad. Sci., Spec. Publ. No. 4, p. 133). The body is skinned out with head and tail attached.

## AMPHIBIA

## CAECILIA SUBNIGRICANS Dunn

*Caecilia subnigricans* Dunn, 1942, Bull. Mus. Comp. Zoöl., **91**, p. 511: Magdalena River, Colombia.

1 (M. C. Z. 26141) Riceito

Primary annuli 158, secondaries 27; diameter included in length 32 times; total length 161 mm.

Both primary and secondary counts are hard to make accurately; my figures for both differ from those of Dr. E. R. Dunn, who kindly examined the specimen. Before submitting it to Dunn I had referred it provisionally to *subnigricans*, a disposition with which he agreed. Dr. Dunn invited my attention to a patch of teeth at the tip of the lower jaw, a condition sometimes found in other immature caecilians, but apparently not in adults.

## BUFO TYPHONIUS STERNOSIGNATUS Günther

*Bufo sternosignatus* Günther, 1858, Cat. Batr. Sal. Brit. Mus., p. 68, pl. v, fig. C: Mexico and Cordova, Mexico, also Venezuela and Puerto Cabello, Venezuela. Restricted to Venezuela by Boulenger (1882).

3 (M. C. Z. 25976-7, 26152) Pauji

1 (M. C. Z. 26151) Cerro Cosme

Even though *Bufo typhonius alatus* Thominot (1884) from Panama should prove to be synonymous, *sternosignatus*, being the older name, will have to be used.

## LEPTODACTYLUS BOLIVIANUS Boulenger

*Leptodactylus bolivianus* Boulenger, 1898, Ann. Mus. Civ. Stor. Nat. Genova (2), **19**, p. 131: Barraca and Misiones Mosetenes, Bolivia.

4 (M. C. Z. 25985-8) Pauji

1 (M. C. Z. 26143) Riceito

A male in this series has two black asperities on each thumb, instead of the one called for by the original description.

## LEPTODACTYLUS DIPTYCHUS Boulenger

*Leptodactylus diptychus* Boulenger, 1918, Ann. Mag. Nat. Hist. (9), **2**, p. 431: Andes of Venezuela.

2 (M. C. Z. 25989-90) Pauji

## LEPTODACTYLUS CALIGINOSUS Girard

*Leptodactylus caliginosus* Girard, 1853, Proc. Acad. Nat. Sci. Philadelphia, p. 422: Rio de Janeiro, Brazil.

6 (M. C. Z. 26144-6) Cerro Cosme

Whether frogs from northern South America, usually referred to *caliginosus*, are really the same as those from Rio de Janeiro, seems questionable.

## HYLA CREPITANS Wied

*Hyla crepitans* Wied, 1825, Beitr. Naturg. Brasil., 1, p. 525: Tamburil region, interior of Bahia State, Brazil.

6 (M. C. Z. 25978-83) Pauji

1 (M. C. Z. 26142) Riecito

Dr. H. G. Kugler contributes several notes, about these frogs which may be summarized as follows: Above, white, almost silver white, with large black eyes whose grayish yellow lids have "a fine black ring around the base" (no trace of this is to be seen in the preserved specimen referred to); finger tips and belly light yellow. One pair, taken in embrace, had brownish markings on a yellowish ground; another mating pair, removed from a test pit, exhibited brown marblings exactly the shade of the soil. The brown markings of others closely resembled the tree-bark on which the frogs were resting, for they change color readily.

They remain quiet except shortly before dawn and dusk when they emit calls, and during the mating season, when they croak at night. Some eggs, placed in a washbasin by Kugler, hatched within forty-eight hours. The species has a pleasant fruity smell and is locally called *Rana Capina*.

## HYLA MISERA Werner

*Hyla misera* Werner, 1903, Zool. Anz., 25, p. 252: Caracas, Venezuela.

1 (M. C. Z. 26150) Cerro Cosme

An adult ♂, head and body length 21 mm. Outer and middle fingers about a third webbed instead of half as called for in the original description. On the back is an elongate X-shaped figure not mentioned in the description; nevertheless the identification seems to be correct.

## HYLA BOULENGERI (Cope)

*Scytotis boulengeri* Cope, 1887, U. S. Nat. Mus. Bull. 32, p. 12: Nicaragua.  
1 (M. C. Z. 25984) Pauji

Mr. R. D. Hamilton of the University of Michigan believes that Venezuelan frogs included under this name represent more than one form. Pending the results of his investigation, I refer this frog to *boulengeri* while observing that the few Venezuelan examples I have seen differ in coloration from topotypical *boulengeri*.

## PHYLLOBATES TRINITATIS Garman

*Phyllobates trinitatis* Garman, 1887, Bull. Essex Inst., 19, p. 13: Trinidad.  
7 (M. C. Z. 26147-9) Cerro Cosme

Head and body length of largest frog, 27 mm.